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| APPLICATION NO.                           | FILING DATE | FIRST NAMED INVENTOR     | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|--------------------------|---------------------|------------------|
| 10/743,369                                | 12/22/2003  | Thomas Walter Keller JR. | AUS920030889US1     | 9321             |
| 61043                                     | 7590        | 06/15/2006               | EXAMINER            |                  |
| IBM CORPORATION (MH)                      |             |                          | CRIBBS, MALCOLM D   |                  |
| c/o MITCH HARRIS, ATTORNEY AT LAW, L.L.C. |             |                          | ART UNIT            | PAPER NUMBER     |
| P.O. BOX 515                              |             |                          |                     | 2115             |
| LAKEMONT, GA 30552-0515                   |             |                          |                     |                  |

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                   |               |
|------------------------------|-------------------|---------------|
| <b>Office Action Summary</b> | Application No.   | Applicant(s)  |
|                              | 10/743,369        | KELLER ET AL. |
|                              | Examiner          | Art Unit      |
|                              | Malcolm D. Cribbs | 2115          |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 December 2003.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/07/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

**Claims 1-20 are presented for examination.**

5 ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15 Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanja [Publication No. US 2005/0132238] in view of Maitra [US Patent No. 5,623647] in further view of Faucher et al [US Patent No. 5,404,543].

As per claims 1-6, Nanja teaches the invention comprising:

20 first measuring the per-thread usage of a device by each thread in a first set of multiple threads [Page 2-3 [0026] "performance monitor collects usage patterns of every application thread running on the system."]; and storing the measured usage [Page 3 [0034] "gathers or derives instruction counts and memory references [which includes usage of the thread] cycle counts and stores..."].

Nanja does not teach a method of determining the next set of threads or sending power management commands in conformity with the measured usage. Specifically, Nanja teaches a method of sending power commands based on the current measured usage cycles for power conservation purposes. However, Nanja do not teach a method 5 of retrieving the measured usage for the next thread application to be run. A routineer in the art would have been motivated to look for a teaching for the possible method of further conserving power by retrieving the measured usage of a thread to be run next.

Maitra teaches another method of conserving power using power commands 10 based on stored usage. Maitra teaches a method of sending power commands *[adjusting the speed of the processor]* based on reading retrieved usage that was stored into memory *[determines the computing requirement of this application by referencing the configuration information read into memory]* of a thread *[application]* to be run next *[determines the scheduled application to be run by the microprocessor in the next 15 quantum]* [Col 8 line 45 – Col 9 line 10]. In summary, Maitra teaches a method of further conserving power by controlling power based on the application to be run next as opposed to adjusting the power based on the current application running.

It would have been obvious to one of ordinary skill in the art to combine the 20 teachings of Nanja and Maitra, which are analogous art, because they both teach a method of sending power commands based on the usage rate of a device. Maitra

covers the deficiency of Nanja by teaching the detail of sending power commands to set the power based on the next process to be run.

Nanja and Maitra do not teach a method of setting a threshold level of total usage for the device in conformity with said retrieved stored measured usage.

Specifically, Nanja and Maitra disclose setting the state of a device based on the stored measured usage. However, Nanja and Maitra fail to detail a method of setting the limit of total usage based on stored measured usage. A routineer in the art would have been motivated to look for a teaching for the possible setting a threshold level in conformity with the retrieved stored usage.

Faucher et al teaches another method of sending power commands based on the measured usage of a device to conserve power. Faucher et al teaches a device controller wherein an usage evaluator further comprises an adaptive threshold circuit for adjusting the threshold based on the measured use of the devices [changing a threshold based on whether the system is operating on AC or DC power [Col 6 lines 48-55]].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Nanja and Maitra with Faucher et al, which are analogous art, because they all teach a method of sending power commands based on measured usage to conserve power. Faucher et al covers the deficiency of Nanja and Maitra by teaching

the detail of setting a threshold value based on usage instead of a constant threshold value.

As per claim 2, Maitra teaches the invention of setting a state of said first  
5 measuring for said next set of threads in conformity with a result of said retrieving and  
determining [Col 8 line 53 – Col 9 line 3].

As per claims 3-6, Nanja, Maitra, and Faucher et al teach the claimed invention  
as stated hereinabove.

10 As per claims 7-14, it is directed to the system to implement the method of steps  
as set forth in claims 1-6. Therefore, it is rejected for the same basis as set forth  
hereinabove.

15 As per claims 15-20, it is directed to the computer program product to  
implement the method of steps as set forth in claims 1-6. Therefore, it is rejected for the  
same basis as set forth hereinabove.

### ***Conclusion***

20 Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Malcolm D. Cribbs whose telephone number is 571-272-  
5689. The examiner can normally be reached on M-F 8AM-430PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

- 5 Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic
- 10 Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Malcolm D Cribbs  
Examiner  
Art Unit 2115

15 May 31, 2006



CHUN CAO  
PRIMARY EXAMINER